

**To:** Shamet, Stefania[Shamet.Stefania@epa.gov]  
**Cc:** Bemis, James K (Jim) NAB[Jim.Bemis@usace.army.mil]  
**From:** Jacobus, Thomas P WAD  
**Sent:** Thur 1/29/2015 9:34:30 PM  
**Subject:** One additional thought: Comments on DDOE discharge letter (UNCLASSIFIED)  
[GT Basin 2 TSS December 2014.xlsx](#)  
[TPJ comments on DDOE Bypass Letter.docx](#)  
[GT Solids in million pounds - through Nov 30 2014.jpg](#)  
[Letter WashingtonAqueductBypassRequest 01 27 2015.pdf](#)

Classification: UNCLASSIFIED  
Caveats: NONE

Stef,

I wanted to add one thought to the discussion. On page 4 of the DDOE letter they use a formula to relate TSS and Turbidity. They reference it coming from the 2001 EA Water Quality Study, which I am sure it did. However, we have never done any integral analytical work to demonstrate the accuracy of this formula across a broad range of particle concentration.

While we are willing and able to do both TSS (using the microwave method) and turbidity (using our Hach bench instrument) I think it would be better to select one technique as the threshold for action. When the basin was fully suspended a week ago I brought back a sample and asked for a TSS analysis. It was 1.38 percent solids which equates to 13,800 mg/lit. Based on that and a some extra water we'll add before use the front end loader to mix it and we take the first sample prior to initiating the discharge I'm confident we will be able to manage a 16,000 mg/L threshold for the discharge of basin #1.

I don't know if we could do this for a basin #2 discharge should that eventually ever occur because basin #2 is so much larger with a different geometric configuration making it impractical to put a bucket loader in it and do what we can do in basin #1.

So for establishing a precedent, if you could make this revision specifically only to basin #1 and allow us to find out how this really works out we could then come up with a basin #2-specific plan should we ever have to discharge basin #2 again with a full load of solids.

Tom

-----Original Message-----

From: Jacobus, Thomas P WAD  
Sent: Thursday, January 29, 2015 3:36 PM  
To: Shamet, Stefania  
Cc: Bemis, James K (Jim) NAB  
Subject: Comments on DDOE discharge letter (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

Stef,

I've attached a spreadsheet sent to DDOE and the other stakeholder with the analysis of the samples taken during the discharge of Basin #2 in December 2014. That is the chart I make reference to in the notes I've added to DDOE's letter to Jon.

In those notes I did a rough conversion of their pdf to a Word document. I did not attempt to clean up the errors in translation because you have the original document (copy attached) and can read from that one -- but by placing my comments inside that document in "track changes" I thought that would be the best way

for you to reference my comments to DDOE's original content.

The final chart on how much we estimated to be in the basins is what DDOE asked for at the beginning of the process and it's the best we can do analytically. To be sure it is not definitive and therefore we should not try to use it as the basis of a formula for limiting the concentration of any future bypass.

I need to leave the office at 5:00 pm to go to the funeral home. I will be back in the office at 6:00 am Friday.

Tom

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